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MEDICAL NEWS LETTER

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Policy

The U. S. Navy Medical News Letter is basically an official Medical Department publication inviting the attention of officers of the Medical Department of the Regular Navy and Naval Reserve to timely up-to-date items relative to medicine, dentistry, and allied sciences. The amount of information used is only that necessary to inform adequately officers of the existence and source of such information. The items are neither intended to be nor are they susceptible to use as a substitute for any item or article in its original form. All readers are urged to obtain the original of items of particular interest to the individual.

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Clarifications Noted In Dependents' Medicare Care Program

Numerous letters coming into the Office for Dependents' Medical Care have revealed many of the more frequent problems and questions facing dependents who make use of the civilian medical care program.

In response to this, the Executive Director for the uniformed services' program has issued the following clarifications:

1) Full Service Coverage: The program provides full service coverage for physicians' or surgeons' fees when the dependent is hospitalized. However, any costs exceeding \$75 for diagnostic tests and laboratory procedures performed before the patient is hospitalized must be paid for by the patient. For tests and procedures relating to proper care after discharge from the hospital, the Government will pay up to a \$50 maximum. These tests and procedures must be performed in connection with the bodily injury or surgical procedure which necessitated the patient being hospitalized. Tests and procedures performed on an outpatient basis for a medical condition are the responsibility of the patient. The only time a dependent will have to pay any part of the physician's bill is when treated for cuts, wounds, bodily injuries, et cetera, on an outpatient basis. When not hospitalized, the dependent will pay only the first \$15 of the physician's bills for such care as authorized under the program, this includes deliveries in the home or office. Any charge in excess of \$75 for laboratory tests, x-rays and pathology examinations will also be paid by the patient.

2) Treatment for Tuberculosis: When the tuberculosis is acute, contagious or requires surgery, hospitalization in civilian facilities is authorized. An acute exacerbation of a chronic TB condition can also be treated by a civilian physician if hospitalization is required. However, routine domiciliary and long-term treatment of chronic tuberculosis does not come within the scope of the medical care program and treatment for such cases is not allowable at Government expense.

3) Maternity Care: Diagnostic and laboratory procedures- For maternity care, there is no \$75 or \$50 limitation on the diagnostic tests or laboratory procedures performed before or after delivery.

Drugs and Medicines - If a physician so desires, in maternity cases, he may procure the necessary medicinals for the patient from a civilian pharmacy. As there is no direct method within the program to pay civilian pharmacies, the physician may add this amount to his own statement of services and submit the bill to the fiscal agent from whom he receives payment under the program.

Circumcision- When a newborn infant is circumcised prior to discharge from the hospital, the cost should be added to the hospital and physician's statements. However, when the circumcision is performed following a readmission to the hospital after the initial discharge, a separate billing from the hospital will be required. What this means to the dependent is that although the physician's costs will be covered, there will be another \$25 charge made for the hospitalization period if the circumcision is performed on an inpatient basis. If the circumcision of the newborn infant is performed by the physician during one of two outpatient visits authorized within 60 days following delivery, the physician's fee is paid by the Government.

Pediatric Care- For premature or ill babies, all required care by the physician during hospitalization is authorized. Well-baby care at birth and during hospitalization by a pediatrician is also allowable in areas where this is customary.

4) Cost of Blood: Charges for blood are authorized. However, the usual practice where friends or relatives replace the blood by voluntary contributions is recommended whenever possible. When blood is purchased the physician in the case of outpatients or the hospital must in the case of inpatients list the charge, because there is no way of making payments directly to blood banks.

5) Necessary Certificates: The DA Form 1863, "Statement of Services Provided by Civilian Medical Sources," will have to be filled out by the dependent or sponsor. These forms are available at the physician's office or hospital participating in the program and not at service installations.

A dependent unable to furnish evidence of eligibility can receive medical care by filling out the necessary information that is required on the form. Personal verification of identity should be shown to the physician or to the proper hospital official. Driver's license, social security card, et cetera, may serve as identification.

6) X-Ray Therapy: Radiotherapy is allowable if prescribed for a condition while the patient was hospitalized and if subsequently carried out or continued following patient's discharge.

7) Semi-Private Rooms: Dependents are authorized to be hospitalized in semi-private accommodations (2, 3 or 4 beds in a room). In case of emergency where a patient is placed in a ward, transfer to semi-private room

should be effected as soon as possible. However, in pediatric care, ward facilities may be provided, if it is the common practice in the community.

8) Emotional Disorders: When an acute emotional disorder threatens the "life, health or well-being" of a dependent, hospitalization is authorized. In such an event, the Government will pay for the necessary care until the acute stage subsides or until the sponsor arranges for care at other than Government expense, whichever is earlier.

Hospitalization will usually not be authorized for more than 21 days. Short extensions may be granted if on advice of the physician it will result in a cure or enable the patient to be discharged and to return home. Also, additional hospitalization may be granted if the underlying diagnosis of the case cannot be completed within the 21-day period. In these cases, the judgment of the physician is the determining factor.

Delay on the part of an available sponsor to provide for care at other than Government expense will not be considered reason to extend the initial 21-day period. However, in cases where a sponsor is returning from overseas or when difficulties arise in arranging for state or local institutions to accept the patient, short extensions may be granted. The Dependents' Medical Care Program does not provide treatment from civilian sources for nervous or mental disorders when an acute emergency which is a threat to the life, health or well being of the dependent does not exist.

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Malaria in the World Today

The United States is no longer malarious and is now concerned with the malaria of other countries. World-wide malaria eradication is a slogan much in the news. Some have concluded that for malariology the sun has set, that additional malaria research would be redundant, and that malariologists are in oversupply. Such conclusions, unfortunately, are premature. There is, in fact, a shortage of qualified malariologists, and there is an urgent need for basic research in malariology.

Adding the best available data it seems that throughout the world in 1955 about 1,070,000,000 persons, or 40% of the world's population, lived in areas still or recently malarious. Reports indicate that during the year approximately 375 millions were under what might be called routine protection against the disease. Control measures varied from completely effective malaria eradication to ineffectual quinine distribution. Probably no fewer than 695 million persons in 1955 were still without the benefit of routine malaria control. On the basis of past conditions in malarious countries, such as India, and allowing for cases occurring in so-called "protected" areas, it seems reasonable to estimate that during 1955 there were some 200 million cases of clinical malaria and over 2 million deaths throughout the world.

These calculations have not been plucked from a hat and are not derived from previous world estimates, which have varied from 250 and 350 million malaria cases annually. The present assessment is based on a country-by-country study, fortified by personal experience, by communication with malarialogists all over the world, and by checking with qualified officials of WHO, ICA, and the Division of International Health of the Public Health Service. Only in the case of the USSR and Communist China was it impossible to obtain current information bearing on the data.

Naturally, world incidence statistics for all diseases are inaccurate. Reports of malaria, published officially, sometimes vary widely for the same area and year. Much malaria is never recorded and many cases of other fevers are returned as malaria. Then, too, such statistics are out of date by the time they are compiled. But, very likely, the estimate of 200 million cases of clinical malaria throughout the world in 1955 is not wide of the mark. Malaria eradication in Asia has hardly begun and in tropical Africa there are formidable technical obstacles now under study but not yet surmounted. Malaria today is still one of the leaders among the diseases that afflict mankind.

Malaria eradication implies both the complete interruption of transmission and the elimination of the reservoir of parasites by a campaign limited in time and carried out so thoroughly that at its end there will be no resumption of transmission.

Malaria eradication programs have 4 phases: preparatory, attack, consolidation, and maintenance. The preparatory phase includes initial survey, planning, and preliminary operations. It generally lasts from several months to a year. The phase of attack begins as soon as the preparatory phase ends and continues with total spraying coverage until malaria transmission has ceased and the parasite reservoir has been nearly emptied. It has generally been found that most falciparum and vivax infections will have died out in 2 and 1/2 to 3 years of interrupted transmission and this is usually the minimum duration of the attack phase. A few, not readily apparent, foci of residual malaria will generally remain at the end of the attack phase.

The phase of consolidation begins as the active attack on the insect ends. During this phase residual pockets of transmission must be found and eradicated and the parasites remaining in man eliminated. Surveillance must be active, complete, and routine over the entire area. Case finding and the use of antimalaria drugs have first importance. This essential and rather difficult phase of consolidation ends when during 3 years of active surveillance no locally contracted infections have occurred. Because malaria morbidity is so low during this key phase in an eradication project, it is sometimes difficult to obtain the necessary financial support from either governmental or international sources to carry the work through to completion.

The final phase of maintenance begins when malaria has been eradicated from an area and it will last as long as malaria exists anywhere in the world. But maintenance is not difficult or expensive, because it is carried out by

regular health departments which add malaria to the list of exotic diseases against which they are always on guard.

Based on a personal communication from the chief of the Malaria Section of the World Health Organization, officially designated nation-wide malaria eradication projects as of October, 1956, were as follows:

Countries in the Preparatory Phase of Malaria Eradication Projects--Bolivia, Cambodia, Colombia, Israel, Jamaica, Jordan, and Trinidad.

Countries in an Early Attack Phase--Afghanistan, Albania, Brazil, British Honduras, Bulgaria, Burma, Dominican Republic, Ecuador, Granada, Guatemala, Haiti, Honduras, Iran, Iraq, Mexico, Nicaragua, Panama, Paraguay, Philippines, St. Lucia, Syria, Turkey, and Yugoslavia.

Countries in which the Attack Phase is Well Advanced--Antigua, Argentina, British Guiana, Ceylon, El Salvador, Greece, La Reunion, Lebanon, Panama Canal Zone, Roumania, Swaziland, Taiwan, Thailand, Tobago, and Venezuela.

Countries in Consolidation Phase with Eradication Practically Complete--Barbados, Corsica, Chile, Cyprus, French Guiana, Italy, Mauritius, Puerto Rico, and the United States.

A century ago in the southeastern United States and in the central valleys malaria was as frequent as common colds are today. In many communities almost no one escaped this disease, which was referred to simply as "the fever." Competent observers in those days saw little possibility of reducing the malaria burden. As recently as the second decade of the present century there were years when almost 800,000 cases of malaria were recorded in a group of 11 southern states.

Because malaria ranks low in morbidity tables, the disease has been given correspondingly low priority in allocating public medical research funds. Yet, very likely, malaria research is as good an investment today as it ever has been.

It should not be forgotten that the United States draws about 60% of its imports from, and sends some 40% of its exports to, countries where malaria is still prevalent. Malaria control among laborers who produce the imports requires, on the average, at least 5% of annual production budgets. This constitutes a malaria tax of more than a third of a billion dollars paid annually by the United States on its imports. As to exports, the total value of business lost to exporters because of poverty directly due to malaria cannot be estimated, but it is certainly enormous. For these reasons, few question the wisdom of the allocations made by ICA for overseas malaria control and many would like to see them increased.

During the period of World War II the United States was preeminent in fundamental malaria research. The concept of world-wide malaria eradication offered us an unprecedented opportunity to maintain our leadership. But during the past 10 years, while the global attack on malaria has been accelerating, we have lost research leadership in this field and have been dropping

rapidly toward the rear. Although we are wisely investing millions of taxpayers' dollars in overseas malaria control, we are allocating only pennies to malaria research. Surely it would be to our advantage to protect our investment by giving much more support to vitally needed concomitant malaria research without which, it seems reasonable to predict, world-wide malaria eradication will be impossible. (Russell, P. F., Malaria in the World Today: Am. J. Pub. Health, 47: 414-419, April 1957)

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Bacterial Endocarditis Following Cardiac Surgery

In the era before cardiac surgery, bacterial endocarditis generally involved endocardial or endothelial structures rendered abnormal by disease or congenital variation, although occasionally it arose on normal structures and pursued a more virulent course. Surgery on the interior of the heart produces a type of acute endocardial injury, both in normal portions of the endocardium and in the area of chronic disease to which the surgery is directed. It should, therefore, not be surprising to find instances of infection of the endocardium after cardiac operations.

With the advent of cardiac surgery, reports of bacterial endocarditis have appeared, first in patients with congenital defects, later in patients operated upon for acquired valvular heart disease. In a report of 1,000 patients operated upon for the tetralogy of Fallot, by systemic-pulmonic anastomosis, Taussig and associates, stated that 17 of 844 who survived surgery developed bacterial endocarditis after surgery, and that 4 died of this complication. The onset of infection in 11 patients was soon after surgery; in 6 others, more than 2 months afterwards. They assumed that the infection occurred at the site of anastomosis, but autopsy was performed in only 2 late cases, and the infection was not proved in one. In the other case, nothing was stated about the site of the infection. They implied that the higher incidence in the early postoperative period was due to infection at the line of suture before it had healed, but stated that the risk of illness after 2 months was no greater than in unoperated patients. Two case reports with autopsy findings, 2 and 2 1/2 years, respectively, after Blalock operations, showed no infection of the artificial ductus, but involvement of the pulmonary and tricuspid valves and a mycotic aneurysm of the pulmonary artery.

Of 273 cases operated on for patent ductus arteriosus, reviewed by Scott, only 1 developed bacterial endocarditis, the febrile episodes appearing 6 months after surgery. Autopsy revealed an aneurysm of the ductus and recanalization with infection.

A few case reports have appeared describing infection following mitral commissurotomy, and all of these, where the organism was recovered, were

due to penicillin-resistant staphylococci, except 1 that was due to a pseudomonas. In 1 instance all cultures were sterile. The interval between surgery and the onset of the illness was reported as 7 to 21 days in most of these, but 1 case of Dalton, Williams, and Atkins occurred 2 months, another 3 1/2 months after operation.

Cases of valvular heart disease subjected to cardiac surgery in the 5 years prior to November 1, 1955, were reviewed. Of 1,889 cases, 1,159 were pure mitral stenosis, 155 pure aortic stenosis, 142 major mitral regurgitation, 33 major aortic regurgitation, and 119 combinations of aortic and mitral stenosis. The remaining 281 were varying combinations of stenosis and regurgitation at 1 or more valves. In addition, 374 cases of congenital heart disease were operated upon. The usual clinical and bacteriologic criteria for bacterial endocarditis were fulfilled by all cases included in this report, except 1 discovered at autopsy. The interval between surgery and the onset of infection was considered to be the time elapsed between the date of operation and the onset of the fever during which positive blood cultures were obtained.

The well-known tendency of bacterial endocarditis to seek out the aortic valve in nonsurgical cases is also manifest in the surgical group here reported.

The onset of the infection occurred fairly quickly in one third of the cases, moderately quickly in one-third, and slowly in another one-third. Yet, the possible causal relationship to surgery cannot be denied even in the last group, except perhaps in 2 cases that appeared 7 1/2 months and 10 months after surgery. There can be no arbitrary time limit beyond which the disease can be said to be unrelated to surgery. Rather, one can say only that the longer the interval between surgery and clinical evidence of infection, the less likely is there a causal relationship. The insidious onset of the disease makes any other conclusion subject to considerable error.

The etiologic agent was not the usual streptococcus viridans, but rather the staphylococcus, most frequently coagulase-negative. Certainly the clinical picture was not characteristic of bacterial endocarditis of a subacute nature, since petechiae were never seen, nor was clubbing of the fingers, Osler's nodes, or a cafe-au-lait color. A palpable spleen was most uncommon. All in all, one is forced to conclude that these infections differ from the commonly accepted pattern of subacute bacterial endocarditis in nonsurgical cases. Embolism was seen in only 1 case.

Clinically and bacteriologically, bacterial endocarditis occurring after cardiac surgery seems to be a more malignant lesion than the common subacute variety seen in nonsurgical cases. This increased severity is probably a reflection of the trauma to the valve, the nature of the organism causing the infection, and the severe stress to which the patient has been subjected. (Denton, C., et al., Bacterial Endocarditis Following Cardiac Surgery: Circulation, XV: 525-530, April 1957).

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Renal Papillary Necrosis

Acute necrosis of the renal pyramids is a relatively uncommon clinico-pathologic entity. Many different factors have been said to be of pathogenetic importance in renal papillary necrosis. The normally poor blood supply of the pyramids as compared with that of the rest of the kidney has been referred to often. Similarly, compression of the pyramidal blood vessels by inflammatory exudate in the presence of acute pyelonephritis or by para-amyloid deposition, and increased intrapelvic pressure caused by urinary obstruction or retrograde pyelography frequently have been implicated. Currently the most common theory holds that the condition has a basis in compression of pyramidal blood vessels by inflammatory exudate, particularly in diabetic persons, and by increased intrapelvic pressure caused by obstruction of the urinary tract. Both these actions serve to deplete further the pyramidal blood supply, which normally is not abundant.

The clinical picture of renal papillary necrosis is extremely variable, but the disease may be divided roughly into subacute and acute types. In the subacute form the development and progression of renal infection usually are slow; the increase in blood urea is progressive; oliguria comes about and death finally occurs. When obstruction of the urinary tract and complicating cardiovascular disease are present, the clinical picture may in no way suggest the diagnosis of papillary necrosis, since the situation is characterized principally by the primary pathologic processes, and with terminal progressive oliguria and uremia uncomplicated by infection of the urinary tract.

The acute type has two forms. Fulminating renal infection may develop, with fever, septicemia, rapidly progressing azotemia and oliguria, a situation which finally terminates in coma and death. On the other hand, if obstruction of the urinary tract is present, the picture may be essentially that of the obstructive disease until it is complicated by a terminal, acute, renal infection which rapidly progresses to uremia, oliguria and death.

The disease usually is fatal, although cases in which spontaneous healing and recovery ensued have been reported. In most of the latter cases the disease was unilateral only; to date no case in which recovery followed unequivocal bilateral involvement has been reported.

Clinical findings most often made are pain in the flank, chills and fever, hematuria, dysuria, urgency and frequency of urination, nausea and vomiting, prostration and coma. In all cases oliguria occurs, at least terminally, with associated mounting uremia and finally coma. Death usually results from either uremia or overwhelming infection.

Diseases which must be distinguished from renal papillary necrosis are: 1) acute pyelonephritis, without papillary necrosis; 2) calculus, with renal colic; 3) renal tuberculosis and 4) renal tumor. Pyelonephritis without papillary necrosis is not so severe or so fulminating as when pyramidal disease is present; the patient is rarely so ill, and the response to conservative measures

may rule out the more serious diagnosis. Roentgenologic studies occasionally may distinguish papillary necrosis, but not always. The passage of a renal calculus in the presence of colic may be confused with the passage of a sloughed necrotic papilla. The roentgenogram may be diagnostic in such cases, but frequently nonopaque calculi and sloughed tissue may resemble each other and make distinction impossible. When hematuria is a presenting symptom, both renal tuberculosis and tumor (of the renal pelvis) may produce a roentgenologic picture resembling that of papillary necrosis. Differential diagnosis, particularly as between renal papillary necrosis and tuberculosis, may be extremely difficult. The fact that papillary necrosis usually is bilateral permits distinction from tumor in most cases. The acuteness of the clinical picture also will incline the diagnosis toward papillary necrosis in distinguishing it from tumor or tuberculosis.

The almost uniform fatality resulting from bilateral papillary necrosis emphasizes the necessity of prevention, rather than treatment, of this disease. Early recognition and prompt adequate treatment of acute pyelonephritis, in both the diabetic and the nondiabetic patient, are essential. Similarly, early recognition and relief of obstructive urologic disease is vital. Good diabetic control probably will help to prevent this disease among patients so afflicted, although the duration and severity of the diabetes are not generally considered to be of importance etiologically. The frequently insidious symptoms of obstructive urologic disease and of renal infection, particularly in diabetic patients, may continue to be sources of delay and frustration.

To date, spontaneous recovery from proved bilateral papillary necrosis has not been reported. Those patients who recovered spontaneously or recovered after nephrectomy probably had unilateral involvement only. In such cases control of infection and relief of urinary obstruction are vital. In addition, the advisability of nephrectomy must be considered. Cases in which unilateral nephrectomy was followed by clinical recovery have been reported. In none of these was contralateral papillary necrosis demonstrated. Whether or not nephrectomy was lifesaving in these cases is purely conjectural. Certainly, nephrectomy is contraindicated if the integrity of the contralateral kidney is in question. (Simon, H. B., Bennett, W. A., Emmett, J. L., Renal Papillary Necrosis: A Clinicopathologic Study of 42 Cases: J. Urol., 77: 557-566, April 1957)

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Diagnosis and Management of Dyspepsia

In the hurry of modern civilization with its attendant stresses and pressures, dyspepsia and peptic ulceration are extremely common. Formerly, the individual had a job requiring individual skill. He had some security of selfowned or small industry, and a sense of being useful and

needed in community life. Today, man is tense from hurry, traffic and competition. He has a feeling of insecurity as he depends more on others, and he has a sense of frustration from not seeing a job completed with his own hands. The individual with dyspepsia or ulcer often has, in addition to outside pressures, an inner conflict because of ambition or goals which are set too high for attainment, and he has a sense of frustration and failure when the perfectionistic standards cannot be met.

The physician should realize that indigestion and dyspepsia are terms that may have widely different meanings to different individuals. Whether the complaint is one of belching, fullness, heartburn or excessive flatus, basically they all result from disturbed physiology of the gastrointestinal tract. These disturbances in the normal physiology of the intestine may result from a variety of causes: stress, aerophagia from rapid eating, gastritis, a biliary or colonic lesion, peptic ulcer, congestive heart-failure, pulmonary impairment and urinary tract disease, to name only a few:

Indigestion or dyspepsia is a symptom of disturbed gastrointestinal physiology, not a disease. When confronted by a patient with dyspepsia, the physician first must analyze the symptoms. Are they the pain-food-relief pattern of duodenal ulcer, the nausea and fried or spicy food intolerance of gastritis or gallbladder disease, the positional heartburn and sour eructations of hiatal hernia, or the bloating and gaseous distention of the irritable bowel syndrome? Secondly, the etiologic factor or factors in this case are established. Lastly, treatment is directed toward the causative factor or factors.

To establish an etiologic diagnosis, a good history and a complete physical examination are essential. Roentgenographic studies of the esophagus, stomach, duodenum, colon or gallbladder are very often indicated in the individual case, as are gastric analysis and gastroscopy or esophagoscopy. Though they are expensive, such examinations serve a twofold purpose for the patient. They establish a diagnosis and allay anxiety. In a case of duodenal ulcer, a complete (etiologic) diagnosis may read, "emotional tension and dietary indiscretions, chronic duodenal ulcer with early obstruction, and hyperacidity." In a case of dyspepsia, such an etiologic diagnosis might read, "chronic anxiety state, aerophagia, hypermotility or irritable bowel syndrome"; in another case, it might read, "carcinoma of the cecum with narrowing of the lumen and secondary irritable bowel syndrome."

In most cases, if the patient understands the cause of his symptoms and their relation to emotional upsets, they are easier for him to control. A sympathetic explanation and an understanding attitude on the part of the physician are important for long-term results in the treatment of dyspepsia. This is perhaps the most important factor in management, but unfortunately it often is the least stressed. The physician should explain to the patient how therapy will help him heal his ulcer. The patient should be taught to avoid stress, overfatigue, alcohol, coffee, et cetera and to increase his dose

of medicines in advance when an unavoidable stressful situation occurs. Thus the patient "runs the ulcer" rather than the "ulcer running the patient." Failure of therapy in cases of dyspepsia and ulcer indicates either lack of adequate treatment over a prolonged time or failure on the part of the patient or the physician to recognize the etiologic factors involved.

The response of the gastrointestinal tube to any stress, injury or irritation is smooth muscle spasm and hypersecretion which may lead to ulceration and chronic neurogenic bowel disorders. Accurate diagnosis is essential for proper therapy because the gastrointestinal tract may react in a similar fashion to a variety of lesions and etiologic agents. In this review of treatment, a plea is made for the overall management of the entire patient rather than a small segment of the duodenum or colon. The importance of a well-chewed, easily digestible diet of small, frequent feedings is again emphasized. The anticholinergic drugs are helpful, but with large doses of strong drugs the side effects and neurogenic bowel upsets may be worse than the original symptoms. For permanent results, however, the patient must be taught how he can handle his own problem and keep it under control. (Wharton, G.K., Balfour, D.C., Jr., Osmon, K.L., Diagnosis and Management of Dyspepsia: Postgrad. Med., 21: 406-409, April 1957)

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Intussusception in Infants and Children

The wide difference of opinion as to choice of treatment of intussusception as expressed in articles from many sources over the years has prompted this report from the Denver Children's Hospital.

The majority of authors in this country and Great Britain as expressed by Dennison, Gross, Moore, Thatcher, and others have advocated prompt open reduction and have condemned nonoperative treatment. Even at operation, many have avoided, if possible, any additional procedure such as appendectomy. More recently, however, there have been reports from American surgeons, including Ravitch, Santulli, and Wyatt, of primary trial by barium enema which are too favorable to ignore. In contrast to the American and British majority, certain Scandinavian and Australian authors have been outspoken in advising primary hydrostatic treatment in most cases.

Those advocating immediate operation without a preliminary closed trial state (1) that precious time is lost in the x-ray room and in observation afterward, (2) that proof of reduction is inaccurate and uncertain, (3) that barium enema fails to reduce most of the enteric type which make up 15% of the cases, (4) that such an inciting cause as a small intestinal tumor or a Meckel's diverticulum cannot be demonstrated, and (5) that gangrenous bowel may be reduced or perforation may be unrecognized.

Advocates of a primary closed trial claim (1) that a high proportion of ileocecal intussusceptions and many ileoileals can be reduced without resort

to operation, (2) that perforation or reduction of gangrenous bowel does not occur with limited pressure, (3) that surgery carries a higher mortality than simple enema, and definitely a higher morbidity as measured by length of hospital stay, fever, vomiting, wound infection, and late adhesions, and (4) that this simple procedure results at the same time in great economic saving. They admit that enema fails to reduce a large number of the ileocecal type and most of the enteric or to show inciting causes such as polyps or diverticula. They support the plan that immediate operation should follow when the least doubt remains as to the completeness of enema reduction. They state that the time required for barium enema need never exceed one half hour and that the total period of observation required after an apparently successful reduction need be only a few hours to rule out small intestinal obstruction. This is no longer than would be required if such an obstruction existed from any other cause.

This report is not intended to emphasize the advantages of any special form of treatment, though results at the Denver Children's Hospital may show reason for a broader viewpoint than is sometimes expressed. An attitude of always operation and never closed reduction has not been changed to always primary enema and never immediate operation. There has been, however, a trend toward primary enema in proper cases with operation to be expected in many. The facts that over one-fourth of the authors' cases in the last 10 years were successfully handled without operation; that in these cases, preliminary barium enema has never caused a delay interfering with recovery; and that enema has actually improved surgical results due to its diagnostic value alone make consideration of primary closed treatment almost mandatory. It must be appreciated that successful ileocecal reduction does not rule out small intestine intussusception as from tumor or diverticulum. The surgeon in charge must be constantly alert as to the possibility of higher obstruction and act accordingly as he would in any such case from some other cause. (Packard, G. B., Allen, R. P., Results in the Treatment of Intussusception in Infants and Children: Surgery, 41: 567-575; April 1957)

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Hepatic Lesions in Sick Cell Anemia

Since 1923 when Sydenstricker et al. made the first post-mortem study of sickle cell anemia, numerous reports concerning the pathologic findings of fatal sickle cell disease have appeared in the literature. The lesions of the liver rarely have been emphasized, although several investigators have commented on the incidence of palpable enlargement of the liver in fatal cases. It is conceivable that, because of the numerous vascular anastomoses in the liver, the lesions resulting from marked vascular and sinusoidal engorgement with sickled red blood cells have special significance.

Thirty-one cases of sickle cell anemia from the files of the Division of Pathology and Microbiology, University of Tennessee, which were necropsied during the years 1935 to 1955, have been studied. The ages of the patients range from 3 months to 45 years. Eighteen patients were under 20 years of age; the remaining 13 were 24 to 45 years of age.

The lesions of the liver in sickle cell disease appear to be related to various mechanisms: (1) long-standing severe anemia, (2) a prolonged hemolytic process with increased excretion of bilirubin and deposition of pigment, (3) repeated blood transfusions which might lead to exogenous hemochromatosis, (4) stagnation of sickled red blood cells in the sinusoids with sinusoidal obstruction, (5) vascular occlusion by agglutinative thrombi.

It is conceivable that prolonged severe anemia may contribute to the hepatic damage. However, a pronounced degree of hepatic damage is rarely observed in patients with chronic anemia, such as congenital spherocytic or hemolytic anemia. Patients with anemia may show cardiac hypertrophy or dilatation, and chronic congestive cardiac failure could account for the hepatic lesions. In this series, marked cardiac dilatation was observed frequently. No evidence of congestive cardiac failure was noted for the patients although a few showed electrocardiographic alterations. Usually, the liver became enlarged and firm prior to the development of cardiac enlargement.

Repeated blood transfusions in patients with chronic anemia may lead to liver damage by serum hepatitis or by the production of exogenous hemochromatosis. There was no clinical history indicating that any of the patients developed serum hepatitis from blood transfusion. The liver was enlarged prior to any transfusion in most of the cases. One child 9 years of age had received 6 blood transfusions, the last having been administered 5 days before death. At necropsy, the liver showed broad bands of loose fibrillar material penetrating atrophic lobules, with foci of recent necrosis and a small amount of iron-positive pigment in the hepatic cells. The Kupffer cells and the scar tissue were not pigmented. No correlation between hepatic lesions and transfusion reaction could be established. The cirrhosis in 9 instances was thought not to be due to transfusions.

The serologic tests for syphilis, when done, were negative. No clinical or pathologic evidence of syphilitic infection existed. Severe dietary deficiency was not of significance in this series.

The sinusoidal stagnation of sickled red blood cells and the agglutinative thrombi in the liver seemed to be responsible for necrosis by blocking the blood flow and reducing the blood supply. Hyaline thrombi caused by intrasinusoidal hemolysis also impaired the circulation and resulted in necrosis. Kimmelstiel described massive necrosis of the liver in a young girl who had had no transfusions and in whose liver there was no evidence of vascular occlusion. He assumed that the lesions were the result of acute vascular spasm. Theoretically, vascular spasm might produce a massive infarct but no such lesions were found in this series.

Morphologic evidence of hepatic cell damage was noted in all cases, and in 9 cases cirrhosis was found. Histologic study of these livers suggested that the lesions in sickle cell anemia were caused by an impairment of blood flow resulting in an anoxic necrosis of the hepatic cells. Sinusoidal blockage by stagnation of the sickled red blood cells, or by hyaline thrombi caused by intrasinusoidal hemolysis, and the vascular agglutinative thrombi of the hepatic capillaries appeared to be responsible for the anoxic necrosis.

In the cirrhotic livers the changes appeared to be of a macronodular or a postnecrotic type. This type of cirrhosis seems to be a unique manifestation of fatal sickle cell disease. (Song, Y. S., Hepatic Lesions in Sickle Cell Anemia: Am. J. Path., XXXIII: 331-344, March-April 1957)

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Placenta Praevia

The material covered here comprises the total number of deliveries from a general hospital (Baylor University Hospital) during the 5 years from 1950 to 1955. There were 32,305 deliveries of all types with 137 cases of placenta praevia, an incidence of 0.42%.

Diagnosis was made in each particular case by characteristic history plus placentographic study or by observations typical of placenta praevia on sterile vaginal examination.

Placenta praevia was marginal in 51%, partial in 10% and central in 39%. Cephalic presentations occurred in 87%, breech presentations in 6.8% and transverse presentations in 4.8%. Twins were delivered in 1.4%.

The standard treatment at Baylor Hospital for central placenta praevia or placenta praevia that covers more than a marginal portion of the os is cesarean section. The amount of cervical dilation must be taken into consideration, and section is the treatment if the patient has an unripe cervix or cervical dilation of less than 5 cm. Twenty-nine patients, or 20%, were delivered vaginally in this series. Artificial rupture of the fetal membranes and, in a few cases, pitocin were used to induce or hasten labor in the cases of several patients delivered by the vaginal route. It is important to remember in managing placenta praevia that rupture of the fetal membranes in the face of a transverse presentation, or posterior implantation of the placenta as described by Stallworthy, can be dangerous. In the first instance additional manipulation is required, resulting in increased risk to the mother and the fetus. In the second instance, disproportion from the placenta riding over the sacral promontory occurs, displacing the presenting part anteriorly.

Cesarean section was performed in 108 cases, or 80%. Fifteen were classic cesarean sections; 1 was extraperitoneal, and the remainder were of the low flap or the low cervical type.

Delivery of the placenta, either vaginally or abdominally, is frequently accompanied by profuse and prolonged hemorrhage. The placenta is attached

to the noncontractile lower uterine segment, and there is a diminution in the amount of decidua, with insufficient thromboplastin for local thrombosis. Rupture and tearing of the large dilated veins of the lower uterine segment frequently occurs. There may be some degree of placenta accreta, and forcible detachment of this leads to profuse bleeding. In some cases it is necessary to perform a rapid hysterectomy or, on occasion, to suture the bleeding vessels at the site of placental implantation prior to closing the uterus.

The management of vasa praevia or placenta praevia of a succenturiate lobe is much the same as the management of placenta praevia. In most cases, diagnosis is not made until after delivery has been accomplished by cesarean section.

The management of placenta praevia at Baylor University Hospital over a period of 5 years is described. There was a fetal mortality rate of 13% and a maternal mortality rate of 0. These low rates are attributed to several factors. The ready availability of blood, including immediately available O Rh-negative, low AB titer blood, is of great importance. Increased use of cesarean section, discontinuance of vaginal operative procedures, better instruction of the patient as to the danger of bleeding in pregnancy and more intensive instruction and training of the physicians engaged in obstetrics are still important. The fetal mortality rate has been lowered by the expectant management of patients who have been pregnant less than 32 weeks. Of equal importance is ready recognition by the pediatrician that part of the bleeding associated with placenta praevia is from the fetal side and, in many cases, results in an exsanguinated infant. (Davidson, V. A., Brunken, R., Placenta Praevia: Its Incidence, Diagnosis and Treatment: J. Internat. Coll. Surgeons, XXVII: 466-468, April 1957)

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American Medical Association Convention

Medical officers attending this convention, 3-7 June 1957, are invited by the Commanding Officer, U.S. Naval Hospital, St. Albans, to make use of the BOQ space available at the hospital. Accommodations will be reserved for those medical officers writing in requesting them. A linen charge of 50¢ for the week will be charged. (Prof. Div. BuMed)

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Naval School of Hospital Administration Affiliation Program

Negotiations for development of an affiliation program between the Naval School of Hospital Administration and American University, Washington, D. C., will be completed before commencement of the 19th class

in hospital administration on 3 September 1957. The program, authorized recently by the Surgeon General of the Navy, Rear Admiral Bartholomew W. Hogan, will provide for presentation by members of the University faculty, under university sponsorship, of certain courses of the curriculum which had previously been presented by civilian instructors from several local universities under individual contractual arrangements. American University also will sponsor courses presented by the faculty of NSHA which meet the university criteria and standards. Under the arrangement it will be possible for the student officers to earn up to 30 formal semester hours of credit during the regular course in hospital administration as now given. (NSHA)

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Fifth Annual National Medical
Civil Defense Conference

The American Medical Association, through its Council on National Defense, is sponsoring its Fifth Annual National Medical Civil Defense Conference on Saturday, 1 June, at the Waldorf-Astoria in New York City. The Conference is being devoted to the medical aspects of the hazards and effects of lethal radiation or radioactive fallout.

A cordial invitation has been issued by the AMA to all medical officers desiring to attend this one-day session, which will start at 0900 and close at 1715. The Council sponsors the Conference luncheon and there are no registration fees or other charges in connection with attendance.

Interested officers should write directly to Mr. Frank W. Barton, Secretary, Council on National Defense, American Medical Association, 535 North Dearborn Street, Chicago 10, Ill. furnishing name, address and information as to whether they plan to attend the luncheon. (ProfDiv. BuMed)

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Reimbursement for American Specialty Board
Fees and Short Course Registrations

This is to caution all officers against incurring expenses in connection with American Specialty Board application and examination fees, and in paying registration fees for attendance at postgraduate short courses, prior to having obtained Bureau authority to do so. Where expenditures are made prior to Bureau permission, reimbursement is not possible.

BuMed Instruction 1500.4A of 6 January 1954 gives the routine to be followed in the case of American Specialty Board examinations. BuMed Instruction 1520.8 of 6 February 1956 furnishes guidelines for requesting

Bureau sponsorship of postgraduate short courses. Requests for permission to participate in Board examinations and to attend short courses, must be forwarded sufficiently in advance of the commencement date, to permit Bureau authorization being obtained before the expenditure of funds. (Prof. Div. BuMed)

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Obstetrics and Gynecology Examination

Applications for certification (American Board of Obstetrics and Gynecology), new and reopened, for the 1958 Part I Examinations are now being accepted. All candidates are urged to make such application at the earliest possible date. Deadline date for receipt of applications is September 1, 1957. No applications can be accepted after that date.

Candidates for admission to the Examinations are required to submit with their application, a typewritten list of all patients admitted to the hospitals where they practice, for the year preceding their application, or the year prior to their request for reopening of their application. This information is to be attested to by the Record Librarian of the hospital or hospitals where the patients are admitted and submitted on paper 8 1/2 x 11". Necessary detail to be contained in the list of admissions is outlined in the Bulletin and must be followed closely.

Current Bulletins outlining present requirements may be obtained by writing to the Secretary's office, Robert L. Faulkner, M.D., American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.
Note:

By correspondence with the secretary, the typewritten list of all patients admitted to the candidate's hospital, referred to in paragraph 2, is interpreted to mean all patients admitted to the Ob-Gyn Service. (ProfDiv. BuMed)

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Attrition Factors in Class "C" Hospital Corps Training

Training of hospital corpsmen is an important function of the Bureau of Medicine and Surgery. An extensive training program is necessary to provide competent technicians to assist the Medical Officers. One factor which tends to detract from the effectiveness of this program is a relatively high attrition rate. Every student attritted represents a loss to the training program in both time and money.

Action taken by one command in an effort to identify factors contributing to a high attrition rate was recently reported to the Bureau. Because

the comments and recommendations in that report are of common interest to all Medical Department personnel, pertinent paragraphs are quoted:

"In an effort to determine the cause of the extremely high attrition rate of students assigned to subject courses, interviews have been held with students at this command. Information obtained from these interviews and from other sources shows that the following factors, at least in part, are responsible for the high attrition rates:

a. Interviews by commands before recommending hospital corpsmen for specialized training are generally inadequate.

b. Not enough consideration is given to the motivation or basic qualifications of persons recommended for specialized training.

c. Requests for specialized courses are sometimes approved when the reason for the submission of such requests is the desire on the part of the individual corpsman for a change of duty station or a chance to escape from some financial or family difficulty.

It is believed that the high attrition rate of students taking subject courses could be substantially reduced if commands recommending persons for specialized courses of instruction would take the following steps:

a. Have the individual interviewed by an officer who is a specialist in the field for which application for special course of instruction is being made. This officer should determine whether the candidate possesses the qualifications prescribed for the particular course and whether he is sufficiently motivated.

b. Make a determination as to whether the candidate has any financial or family difficulties that would affect his chances for a successful completion of the course.

c. After the candidate has been interviewed and it is determined that he will be recommended for the school, make an entry of such recommendation on page 13 (administrative remarks page) of the enlisted service record.

d. Nominate for special training only those persons who are recommended after careful interview even though quotas may go unfilled.

This command has attempted to evaluate applicants for special courses of instruction as outlined in paragraph 3 with gratifying results. During the period from 1 September 1956 until 15 March 1957 eighteen applicants from this hospital have been assigned to special courses of instruction at this command. Only one student from this group has been disenrolled from the courses." (PersDiv. BuMed)

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From the Note Book

1. Commissioning Ceremonies of the Naval Aviation Medical Center, Naval Air Station, Pensacola, Fla. were held on April 30, 1957. Principal speakers

for the occasion were Vice Admiral A.K. Doyle, U.S. Navy, Chief of Naval Air Training and Rear Admiral Bartholomew W. Hogan, Surgeon General of the Navy. Established under a Commanding Officer and under the management control of the Bureau of Medicine and Surgery, certain existing facilities of the Naval Air Station, Pensacola, were re-designated to form the new Naval Aviation Medical Center. These activities were: the Naval School of Aviation Medicine; the Naval Hospital; and certain areas of the Naval Dispensary. Captain L. E. McDonald, MC USN, is the Commanding Officer of the Center. (TIO BuMed)

2. The Board of Reserve Consultants consists of: Dr. Donald Anderson, Medical Education; Dr. Joseph Barr, Orthopedic Surgery; Dr. F.J. Brace-land, Psychiatry and Neurology; Dr. Edwin N. Broyles, Otolaryngology; Dr. Gordon M. Bruce, Ophthalmology; Dr. Lowell T. Coggeshall, Tropical Medicine; Dr. Winchell McK. Craig, Neurosurgery and Chairman of the Board; Dr. John G. Downing, Dermatology; Dr. Paul Greeley, Plastic Surgery; Dr. Donald Hale, Anesthesiology; Dr. Richard Kern, Cardiology; Dr. George Lyon, Pediatrics; Dr. Daniel F. Lynch, Oral Surgery; Dr. Alphonse McMahon, Internal Medicine; Dr. William L. Rogers, Surgery; Dr. Wendell G. Scott, Radiology; Dr. Benjamin Tenney, Jr., Obstetrics and Gynecology; Dr. Shields Warren, Pathology; and Dr. M.G. Westmoreland, American Specialty Board Requirements. (TIO BuMed)

3. Officers under flight orders are urged to perform requirements for May and prior deficient months as early as practicable to insure aviation payment in June. Certificates received by 6 June will be paid for on 15 June as usual. Certificates received from 7-14 June will be paid for on 30 June. Those received thereafter will be paid in July. The limited time schedule for pay record renewals and close of fiscal year require earlier deadlines than usual. (Officers Accts. Office)

4. On 12 April 1957, a joint meeting of the staff of the U. S. Naval Hospital, Philadelphia, Pa., and the Philadelphia Society of Anesthesiologists was held in the auditorium of the U. S. Naval Hospital, Philadelphia, Pa. The meeting was attended by approximately 75 anesthesiologists from Philadelphia and vicinity. (USNH Philadelphia, Pa.)

5. In an article entitled "Use of Antihistamines" appearing in the U. S. Navy Medical News Letter, Vol. 29, No. 8, it was noted that the following item was not included in the list of readily available antihistamines: Tripelennamine Hydrochloride Tablets 50 mgm (3/4 gr) (Pyribenzamine- This stock catalog item is available from the various supply depots. Editor)

6. The ophthalmoscopic changes associated with hypertension are: (1) angiopathy, which includes generalized and focal vascular sclerosis and narrowing of arterioles; (2) retinopathy which includes hemorrhages, exudates, neovascularization, papilledema, and macular stars. (GP April 1957, G. Lockhart III, M.D.)

7. Nonbacterial infections account for approximately 85% of all respiratory disease. A new group of viruses called adenoviruses cause a major portion of these nonbacterial infections among military recruits, but constitute only a minor problem among civilians according to recent studies. Prevention and therapy of endemic respiratory disease are discussed and the abuse and misuse of antibiotics emphasized. (Post Graduate Med., April 1957, A. S. Evans, M.D.)

8. A group of 101 patients having aortic aneurysm is presented. Sixty-five of these lesions involved the abdominal aorta and 36 the thoracic aorta. Operative and nonoperative groups are compared. (Circulation, April 1957, B. Roberts, M.D., G. Danielson, M.D., W. S. Blakemore, M.D.)

9. Heel spur (calcaneal spur) is due to mechanical rather than infectious factors. Surgery is indicated only after palliative measures have failed. (Arch. Surg., April 1957, H. L. Duvries, M.D.)

10. Segmental gastric resection is an acceptable operation for duodenal ulcer. It is a physiologically sound operation and offers many technical advantages in dealing with the difficult duodenal ulcer. (Surgery, April 1957, O. H. Wangenstein, M.D.)

11. The indications, contra-indications and dangers of steroid therapy are reviewed in A. J. Med. Sci., April 1957, R. A. Kern, M.D.

12. Thus far in 1957 the reported incidence of poliomyelitis has been about one-half of that for the same period of 1956. The number of paralytic cases has also been about half of that for last year. In about half of the States, the numbers of cases reported since January 1 have been substantially below (50% or more) the numbers for last year. In about one-fourth of the States, there have been increases as compared with 1956, some of which amounted to 100% or more. However, several of these are based on a small number of cases and, as a consequence, may not be considered significant. (P. H. S. H. E. W.)

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BUMED INSTRUCTION 11110.2

25 Apr 1957

From: Chief, Bureau of Medicine and Surgery
Chief, Bureau of Yards and Docks
To: Distribution List
Subj: Criteria to be used in developing the medical portion of Military Construction Programs and data required in justification of medical and dental facilities in Military Construction Programs
Ref: (a) DODINST 6015.7 of 13 Dec 1956, same subj.
(b) SECNAVINST 11013.12 of 8 Jan 1957

This instruction outlines procedures to be followed in implementation of reference (a).

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BUMED NOTICE 4315

24 Apr 1957

From: Chief, Bureau of Medicine and Surgery
To: Naval Hospitals and Activities Having Station Hospitals
Subj: Inflight insurance for aeromedical evacuation patients

This notice provides information on the availability of inflight insurance for patients traveling on scheduled Military Air Transport Service (MATS) aircraft.

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BUMED INSTRUCTION 6120.11A

23 Apr 1957

From: Chief, Bureau of Medicine and Surgery
To: Ships and Stations Having a Flight Surgeon or Aviation Medical Examiner
Subj: Physical qualification certification by the Civil Aeronautics Administration of Naval and Marine Corps personnel
Ref: (a) Article 15-59(5) ManMed

This instruction is promulgated for guidance of flight surgeons and aviation medical examiners with respect to physical examinations and physical qualifications of candidates for Civil Aeronautics Administration Second Class

Airman's Medical Certificates, the processing of the Report of Medical Examination, Standard Form 88, and the issuance of the aforementioned certificate. BuMed Instruction 6120.11 of 8 April 1955 is canceled. Paragraphs 3a, 5a, and 5b(1) have been modified.

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BUMED NOTICE 1510

2 May 1957

From: Chief, Bureau of Medicine and Surgery
 To: Ships and Stations Having Medical/Dental Personnel
 Subj: Outservice Training Program; recording of educational achievement
 Ref: (a) BUMEDINST 1510.7A
 (b) BuPers Manual, Art. D2103

This notice invites attention to the requirement for recording information concerning courses successfully completed under the provisions of reference (a).

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BUMED NOTICE 7200

22 April 1957

From: Chief, Bureau of Medicine and Surgery
 To: All Naval Hospitals and National Naval Medical Center
 Subj: Cost of disbursing functions; request for information concerning
 Encl: (1) Form for reporting cost of Disbursing Functions (2 copies)

This notice requests information regarding the present costs of performing certain disbursing functions.

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BUMED NOTICE 7140

7 May 1957

From: Chief, Bureau of Medicine and Surgery
 To: All Activities Under Management Control of BuMed
 Subj: Expenditures for overtime

This notice promulgates instructions regarding the elimination of expenditures for overtime.

SUBMARINE MEDICINE SECTION



Diving Casualty Case Studies

Case No. 18

This diver was known to be a strong swimmer and excellent athlete (Olympic competitor). He was one of the early users of the aqua-lung. He became a championship caliber sports diver and a national hero to his people. On this occasion he was trying to recover the bodies of two foreign tourists who had been murdered in his home town.

Accounts vary but he apparently used a twin tank aqua-lung having the standard seventy cubic foot tanks. He dove in water described variously at 145 to 340 feet but probably was not over 190 feet. Since he was searching for weighted bodies, we may assume he was close to the bottom. Hydrographic charts show a maximum depth of 32 fathoms (192 feet) in the area. He dove for "about 25 minutes" and "ascended slowly". After resting awhile he dove again but ascended shortly afterward. There was some suggestion he surfaced because of "bad air" the second time.

Comment: Diving to depths for times which cannot be adequately decompressed is a mistake scuba divers make too often. It is necessary to plan a deep dive in advance and establish a time schedule which will leave a sufficient air supply for the decompression time. Once worked out carefully, the time schedule should be inviolate. Difficulty, disaster and death are the result of neglecting this consideration, as this case demonstrates. This was classic error No. 1 in this case (Art: 701, Diving Manual, Art: 10.5.4 Submarine Medicine Practice).

The only recompression chamber in the area was owned by a commercial diving firm operated by an American. The diver went to this firm but there was about an hour's delay in locating the owner. When the owner arrived at the shop the diver was unconscious, having convulsions and difficulty in breathing.

Comment: On the information given the owner it could be considered highly probable this is a diving casualty and because the convulsions suggest a C.N.S. "hit", it should be treated as a serious case and Treatment Schedule 3 or 4 used. (Article 854, Diving Manual).

The local physician frankly admitted he knew nothing about diving

casualties. The basic ideas of how to accomplish decompression were rapidly explained to him and he agreed to their logic. The decision was made to use the standard decompression table for a 170 foot dive of 75 minutes duration in the belief this would be adequate.

Comment: This decision to recompress the patient was correct as subsequent events showed, but a classic error was made in attempting to treat a casualty by use of the decompression tables for a dive. In the event a diver is unable to obtain the decompression for his dive in the water - and this is not uncommon in scuba diving - it is permissible to try the decompression for the dive in a chamber if the recompression can be started promptly. Even so in this instance the probable depth and duration of the dive exceeded safe limits for surface decompression procedure (Art. 834, Diving Manual). In this case with the delay of an hour or more since surfacing and in the presence of "serious symptoms" (convulsions) indicating central nervous system involvement, the patient should have been treated by Treatment Table 3 or 4. Never Attempt To Treat a Patient With Standard Decompression Tables. This was classic error No. 2 in this case.

The diver was recompressed to a pressure equivalent to 50 feet, the first stop of the table chosen. After 3 minutes at this depth, the diver regained consciousness, convulsions ceased and he indicated by signs that he felt well. The schedule was followed but after 28 minutes at the 10 foot stop the diver began to beat on the chamber and demand to be taken out so he could vomit. This provided the attendants with a dilemma. There was no attendant with the diver to help him if he should vomit and aspirate some vomitus. It was decided to take him out of the chamber. This was done. The diver promptly vomited, felt better and then, against the dire warnings of the attendant, refused to enter the chamber because he felt well at the time.

Comment: Even though the patient feels well the treatment schedules should be adhered to faithfully. They represent the best knowledge available on the subject. This was classic error No. 3 in this case (Art. 835(d), Diving Manual).

The diver left for home but about 4 hours later he was brought back. As predicted, he was in trouble, paralyzed from the waist down, and with a "heavy feeling" over the heart when he tried to breathe. He was replaced in the chamber and pressure built up to the equivalent of 50 feet. At this depth, feeling had returned to the legs. He was decompressed in stages from this depth but once again the diver began to pound on the chamber and demand he be released. He was ignored this time and slow recompression was continued. When removed from the chamber this time he was unconscious but physicians on the scene found his heart action and blood pressure satisfactory. There was evidence of reflexes when his toe was pricked with a pin. The diver was removed to his home where his clinical course steadily grew worse until he died about 12 hours after he surfaced from the last dive.

Comment: The prediction of a recurrence was almost a certainty and was confirmed. All told 5 different physicians saw this patient at one time

or another but none of them knew anything about diving casualties. The only man available familiar with diving was the commercial diver who owned the recompression chamber. He understood the need for decompression and how to do it for dives but was without knowledge concerning the treatment of diving casualties. Recurrences require special handling and are always regarded as serious cases (Art. 855, Diving Manual). They require a long time under pressure which is reduced very slowly.

This case has additional side issues. The diver used an outfit which had been charged with air several months before use. Whether the oxygen content of the air had been depleted by oxidative reactions with the flask walls will never be known in this case. The scene of this casualty was in a semi-tropical climate. Under these circumstances the temperature in the chamber may be very hot causing the patient to lose much fluids and salt by perspiration. These cause the usual difficulties and require the usual treatment. In this instance it probably would have been impossible to render such aid in the small chamber available. When such a dilemma arises the decision will rest on clinical judgment (Art. 857, Diving Manual). Unless the physician knows something about the subject he has poor grounds for his judgment.

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RESERVE SECTION

Reserve Hospital Corps
Division 1-1, Boston, Mass.

Each Wednesday at 7:30 p.m., six officers and 46 enlisted hospital corpsmen meet at Headquarters, First Naval District, Boston, Mass. to conduct classes lasting 2 1/2 hours, for the training of inactive Naval Reserve hospital corpsmen. This unit, typical of the hospital corps divisions established throughout the continental naval districts, has as its commanding officer, LCDR Burdick G. Clarke (MC) USNR, Assistant Professor and Head of the Department of Urology at Tufts University, School of Medicine. Other members of the teaching staff of this unit include a psychologist at the Boston V. A. Hospital; a chemical engineer; a physician at the Harvard School of Public Health; a nurse at the Bedford V. A. Hospital; an entomologist and a pharmaceutical representative. In addition there are 5 chief hospital corpsmen and other rated hospital corpsmen with considerable experience through previous service on active duty and in the Naval Reserve. Among the hospital corpsmen receiving training, there are 2 taking pre-medical courses, 2 at schools of pharmacy, 2 at schools of nursing, and 6

others at schools for training in pharmacy, X-ray or as laboratory and X-ray technicians.

In addition to the weekly drills, this Hospital Corps Division reports as a group for annual 14 days active duty for training at the U. S. Naval Hospital, Chelsea, Mass. In commenting on the training program conducted by Hospital Corps Division 1-1, Rear Admiral C. G. Clegg MC USN, District Medical Officer, First Naval District, stated "Naval Reserve Hospital Corps Division 1-1, commanded by a Boston surgeon, staffed by medical specialists and comprising a combination of veteran hospital corpsmen and new recruits who want training in this field, is the kind of organization which helps us assure ourselves and the service that well-trained men and women will be available for medical service when and if they are needed." (30 March 1957, Boston Herald)

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New Medical Department Correspondence Course
Aviation Medicine Practice (NavPers 10912-A)

The Medical Department correspondence course, Aviation Medicine Practice, NavPers 10912-A is now available for enrollment by regular and reserve officer and enlisted personnel of the Medical Department. This course consists of 6 assignments and is evaluated at 18 naval reserve promotion and/or retirement points.

Course material includes discussions of: severe physiological stress due to reduced barometric pressure, acceleration, noise, vibration, and danger; physiological requirements for oxygen equipment, pressurized equipment, and other devices designed to make the flyer's environment as normal as possible; special problems in the fields of ophthalmology and otolaryngology; disturbances of the cardiovascular system resulting from flight; selection of personnel; physical and psychological standards and examinations used in screening and placement; the relation of psychopathology and neuropsychiatry to aviation medicine; aviation dentistry; operational problems; and air evacuation of the sick and wounded.

Applications for this course should be submitted on form NavPers 992 (Revised 2-56), with appropriate change in the "To" line, and forwarded via official channels to the Commanding Officer, U. S. Naval Medical School, National Naval Medical Center, Bethesda 14, Md. (NavMed School)

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The printing of this publication has been approved by the Director of the Bureau of the Budget, 16 May 1955.

Delays Encountered by Navy Reserve Dental Officers Taking Correspondence Courses--Dental Officers in the Naval Reserve, not on active duty, frequently cause unnecessary delays in their applications for correspondence courses and their receipt of completion letters for the following reasons:

1. The enrollee bypasses the chain of command, making it necessary for the application to be sent back to the appropriate naval district for endorsement.
2. The enrollee addresses correspondence regarding BuMed courses to the Bureau of Medicine and Surgery instead of to the U. S. Naval Dental School, National Naval Medical Center, Bethesda, Md.
3. The enrollee neglects to indicate a second choice on his application. Many Reservists apply for the same course at the same time and the desired course is not available.
4. The enrollee neglects to sign application.
5. The enrollee does not indicate where classified material is to be stored.
6. Letters of Satisfactory Completion of courses are delayed because the enrollee fails to return text material upon completion of the course.

Inquiries- All inquiries regarding Letters of Satisfactory Completion and point credits should be addressed to the U. S. Naval Reserve Officer Performance Recording Activity, Omaha, Neb.

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DENTAL



SECTION

Announcement of the American
Board of Periodontology

The American Board of Periodontology announces that until January 1, 1962 it will examine acceptable candidates who have one academic year of formal graduate or postgraduate education and training in periodontology and its supporting subjects and a second year of additional formal education and training in the field, or its equivalent. After that date only 2 academic years of formal education and training at an approved institution will qualify an applicant for the examinations of this Board. Three years of practice devoted

principally and primarily to periodontics are in addition to the educational requirements in either case.

It is further announced that the date for filing applications is on or before 1 July of the year preceding that in which the examinations are to be taken.

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New Dental Equipment and Technics

Dentistry, as well as industry, has benefited by newly developed materials, machines, and technics. In the last few years, the development of faster dental engines, frictionless handpieces and superior cutting tools (tungsten carbide burs and diamond abrasive instruments) has enabled the dentist to reduce operating time, with less fatigue to himself, and with greater comfort to the patient.

Patients, relieved of fear and pain, are more cooperative and this, together with faster cutting instruments, enables the dentist to accomplish more treatment per appointment.

The Navy has embarked on a 4 year program to convert its dental operating units to high speed operation. New cutting instruments and water coolant apparatus have been made available in the Medical Stock List for operation at higher speeds.

It is essential that both dental officers and dental technicians operate as a team in order to make maximum use and attain the greatest efficiency in use of high speed technics.

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Navy Dental Repair Service

The Navy Dental Service maintains a preventative maintenance program and provides repair service for over 2,000 dental operating units and associated dental equipment.

Operation of the maintenance program requires about 2% of the total number of personnel in the dental technician rating group. This, at the present time, amounts to about 100 dental repair technicians.

Dental repair facilities are provided at larger dental facilities within the continental United States, and overseas, and in certain ships. A repair facility is normally established in one of the larger most centrally located activities to provide dental repair service to other smaller facilities in the area. Repair facilities in AR's, AD's, and AS's provide dental repair service to all ships having dental facilities.

Board Certification

Commander Henry H. Scofield, DC, U. S. Navy, a member of the staff of the U. S. Naval Dental School, National Naval Medical Center, Bethesda, Md., has recently been certified by the American Board of Oral Pathology.

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PREVENTIVE MEDICINE SECTION

Preventive Medicine Unit No. 7 Commissioned

The U. S. Navy officially commissioned the U. S. Navy Preventive Medicine Unit No. 7 in Naples, Italy, on 2 May 1957. Rear Admiral Bruce E. Bradley, MC, USN, Deputy Surgeon General of the Bureau of Medicine and Surgery, was guest speaker at the ceremony attended by Army, Navy, and Air Force Officers, NATO Southern Europe Commanders, and Italian Government and Health Officials.

With the commissioning of Preventive Medicine Unit No. 7, the Medical Department has provided full preventive medicine support for all fleet concentration areas throughout the world. Since 1951, the Mediterranean area has had only limited support; now, complete services will be available to forces ashore and afloat throughout the Eastern Atlantic and Mediterranean area.

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Control of Streptococcal Infections in Grade Schools

The use of mass chemoprophylaxis for the control of epidemic streptococcal infections in military populations is now a well established procedure and has resulted in the prevention of many cases of rheumatic fever. The use of penicillin, either oral or injectable, for this purpose has been extensive at the Navy recruit training centers. While some problems in optimum dosage, choice of preparation, and time of administration of the penicillin

remain to be solved, the major remaining problem seems to be that of teaching physicians to recognize outbreaks of streptococcal infections and to wisely employ penicillin prophylaxis. When this last hurdle is crossed, another step forward in the control of rheumatic fever in the community will have been made.

A recent article by David C. Poskanzer and coauthors (*Epidemiology of Civilian Streptococcal Outbreaks Before and After Penicillin Prophylaxis*. *Am. J. Pub. Health*, 46: 1513-1524, December 1956) illustrates the successful use of oral penicillin to interrupt an outbreak in civilian grade schools in New York State. When a dosage of 250,000 units twice daily for 10 days was used in one school, the outbreak was abruptly terminated. Although some children still carried the streptococcus in their throats after completion of the course, these apparently did not provide a focus from which the outbreak could recur. In another school where a smaller dosage of oral penicillin was given, interruption of the epidemic occurred only during the course of prophylaxis with prompt recurrence after discontinuance. Presumably, this was due to the fact that the carrier incidence had not been reduced. This could have been anticipated from similar Navy experience.

Some interesting data on penicillin reactions were included in the article. Students and staff were queried about a past history of penicillin administration and reactions. About three quarters, regardless of age, had previously had penicillin and 2 to 3% of the total 849 people queried gave a history of a penicillin reaction. This closely parallels the findings in Navy recruits. There was no particular correlation of a history of penicillin reaction with age.

Only 3 reactions occurred among the 856 individuals who were given penicillin: an angioneurotic edema in a 28 year old teacher who had never had penicillin before, a mild transient rash in a 54 year old cafeteria worker with no past history of penicillin administration, and a mild transient rash in a 6 year old student who had previously had penicillin without reaction.

Another interesting feature was the relatively high incidence of infection among the youngest age groups with other children in the family who were infected, yet there was a relative paucity of infections among parents. This illustrates the need to consider the inclusion of the preschool children among the families of the school children in a prophylaxis program if maximum benefit is to be derived and a recurrence prevented.

Currently, the oral penicillin dosage of 250,000 units 3 times daily for a minimum period of 10 days is being recommended. This increase over the old recommendation of 2 tablets daily has been made in consideration of the fact that prophylaxis is usually begun during an outbreak and provides both therapy for those already infected and prevention for the uninfected. Oral penicillin prophylaxis appears to be particularly applicable to food-borne outbreaks, in children, or any other situation where the population is reasonably stable and the administration can be controlled without great difficulty. So far, no clear cut advantage of any oral preparation over the standard issue buffered penicillin G tablets has been demonstrated.

A single 600,000 unit injection of Benzathine penicillin appears to be better therapy and to persist for about 3 weeks as a preventive. This offers the advantages of certainty of administration and greater efficacy over oral penicillin but apparently is attended by a slightly higher incidence of reactions and costs slightly more than the 10-day course of oral penicillin. (Seal, John R., Capt. MC USN, PrevMedDiv, BuMed)

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Plastic Dinnerware

A recommendation to discard cracked or chipped china is often included in reports of sanitation inspections of food establishments. This recommendation is based upon laboratory evidence that minute cracks and crevices in the glazed finish of ceramic dishes can provide harborage and, in many cases, food for bacteria.

Efforts to reduce the cost of replacement of broken ceramic dishes have occasionally resulted in purchases of melamine (plastic) dinnerware. Undoubtedly, melamine dishes can be broken but resistance to breaking, cracking, and chipping is much greater than that of institutional-type china. However, lacking the hard glaze of china, it is comparatively easily scratched and marred. It tends to char when used as an ashtray.

Objectionable stains may occur in melamine coffee cups, and on plates or sauce dishes when exposed to such foods as tomatoes. Cleaning of dishes should be accomplished as soon as possible after use to reduce the possibility of rapid staining. The use of abrasive cleaning agents is contraindicated due to the effect on luster. Loss of luster indicates glaze failure and can properly be expected to reduce acceptability among users. The public frequently measures the state of cleanliness by the degree of smoothness and shininess, similarly, the sanitarians' rule; "clean to the sense of sight and touch."

It is appropriate, therefore, that the attention of responsible officials of food establishments under naval jurisdiction be directed to the disadvantages likely to be encountered when plastic dinnerware is used in mass-feeding operations.

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The Navy Records Management Center and the Tuberculosis Control Program

A building with office-space area greater than that of the Empire State Building is located in St. Louis, Missouri, and exists for the express purpose of collecting and storing the records of the Armed Services. The Navy Records Management Center utilizes about 1/3 of this building.

The Center is intimately related to the Navy's Tuberculosis Control Program through its use as storage for all 70-mm. photofluorograms after each has been read at the originating activity and reviewed at the Bureau of Medicine and Surgery. Other x-rays, including 14- x 17-inch chest x-rays, which show pulmonary lesions or other significant conditions are also stored at the Center.

The films are catalogued and stored so that at any future time they are readily accessible for review. The importance of the availability of old x-rays in the determination of the prior existence of pulmonary disease is appreciated by any physician who has to deal with the problem of the stability, activity, benignity, or malignancy of a "newly discovered" pulmonary lesion.

Since 1949, when the 70-mm. photofluorogram was first used in the routine survey work in the Navy, the Center has collected approximately 9 million such x-rays. In previous years, a comparable number of 35-mm. survey photofluorograms had been collected.

The photofluorographic films are stored according to the name, rank or rate, serial number, duty station, and place and date of birth as recorded on the accompanying log (NavMed-1161). Therefore, an activity requesting a film from the Center should give as much identifying information as possible in order to obtain the correct film promptly.

Normally, it takes about 6 months for a shipment of photofluorograms to reach the Records Center from the originating activity via the Bureau of Medicine and Surgery, where all films and reports are reviewed. If the desired film is 6 months old or older, it is more expeditious to direct the request to the Center rather than to the Tuberculosis Control Section of the Bureau of Medicine and Surgery. (Chace, John F., Capt. MC USN, Prev-MedDiv., BuMed)

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Potential Health Hazard During Burning on Surfaces Coated with Vinyl Paints

Eye and throat irritation and corrosive action on clothing and metallic tools have been experienced when burning is done on surfaces coated with paints containing vinyl zinc chromate. The use of local exhaust ventilation is not practical because it interferes with the operation.

The following observations, based on data obtained during actual operations, may be of assistance in controlling the hazard:

1. Carbon monoxide, hydrogen cyanide, and phosgene are not produced in significant quantities when vinyl coatings are welded or burned.
2. Arc welding on vinyl-coated surfaces does not produce excessive hydrogen chloride in the breathing zone of the welder if adequate exhaust ventilation is used. Adequate local exhaust ventilation requires exhausting

a minimum of 250 cubic feet per minute at the intake, said intake to be not more than twelve inches from the point of generation of the fumes.

3. Acetylene burning on vinyl coating produced excessive concentrations of hydrogen chloride and personnel complained of acute nasal irritation. Because exhaust ventilation is impractical for use during gas cutting vinyl-coated surfaces, such burning should take place only when the burner is equipped with, and using, an air-supplied half-mask respirator, or a properly fitted cartridge respirator with acid gasabsorbing cartridges. In addition, good general ventilation should be provided in all compartments where vinyl coatings are being welded or burned. This includes adjacent compartments on the opposite side of the bulkhead or deck where welding and burning is being done.

4. The total acidity of the atmospheric samples analyzed was greater in all cases than could be accounted for by hydrogen chloride alone; this may indicate residual carbon dioxide in the sample, or the presence of acid other than hydrogen chloride. Considerable quantities of carbon dioxide are evolved during welding or burning on vinyl coatings.

5. Incidents of respiratory or eye irritation, as well as deterioration of clothing and tool corrosion resulting from welding or burning on vinyl-coated material, should be reported immediately to the Medical Department in order to enable the industrial hygienist to measure the contaminants, and to take corrective action. (Industrial Health Report, Puget Sound Naval Shipyard, January 1957)

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Status of Poultry Inspection

Three general statements describe the current status of poultry sanitation: (1) substantial gains have been made in poultry sanitation by many progressive processors and distributors; (2) there is a definite need for even wider application of known sanitary measures throughout much of the poultry industry; (3) there are a number of current developments which show promise of bringing about vast improvements within the next few years.

Improved sanitation and refrigeration practices have made the processing and distribution of ready-to-cook poultry products possible. Since 1928 the U. S. Department of Agriculture has provided an inspection and sanitation service to the poultry industry. More than 250 plants now voluntarily operate under USDA inspection, producing 20 to 25% of the total poultry processed in the United States. The requirements of the Department of Defense for inspected poultry to feed military personnel are important in influencing processors to use inspection services. Contributory, also, is the assistance thus provided in meeting the requirements of the U. S. Food and Drug Administration and other regulatory agencies.

Along similar lines, some State and local jurisdictions offer permissive poultry inspection and sanitation services. Furthermore, general food sanitation programs in many States have been effective in bringing about improvements. Notwithstanding progress made, many existing conditions and practices leave much to be desired. Local requirements vary greatly. Some processors have never been advised on the essentials of good sanitary practice, or have disregarded such advice in the absence of effective enforcement. Full realization of the need for adequate enforcement programs is now becoming apparent to many regulatory officials and representatives of the poultry industry. Enforcement of applicable existing regulations may be largely ineffective because of: (1) inexperience or disinterest on the part of enforcement personnel; (2) insufficient numbers of enforcement personnel; (3) lack of support for the program; or (4) the regulations do not provide the authority needed for effective enforcement.

Many basic conditions and operations have been found which are unsatisfactory from a sanitation viewpoint. In many instances, habit, local custom, or economic considerations may be responsible. Contributing in large measure, however, is the lack of knowledge or interest on the part of management.

Current developments indicate an increased realization of the need for definitive action by official agencies in the field of poultry sanitation. The interest and cooperation of the poultry industry, of Federal, State and local agencies, and of professional associations, has resulted in the development of a suggested poultry ordinance by the U. S. Public Health Service. Several organizations have gone on record recommending the adoption of this ordinance. Bills have been introduced in Congress which would provide for mandatory inspection by USDA of all poultry and poultry products processed for interstate commerce.

Although significant progress has been made, there is an obvious need for more consistent and widespread application of known principles of sanitation to the poultry industry. Associated with this need is the necessity for adequate official inspection for wholesomeness of poultry. Recognition of these needs has resulted in proposals which are directed toward the establishment of mandatory official poultry inspection programs. (Condensed: Atkinson, J. W., D. V. M., Status of Poultry Sanitation: Journal of Milk and Food Technology, 19: 248-251, September 1956)
(Attention of Medical Officers is invited to the fact that unless otherwise required by local regulation, civil or military, only that poultry received by local commands through Navy supply channels is necessarily subjected to inspection. Procurement of poultry from inspected sources by open messes, cafeterias, and other food establishments is therefore recommended.)

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Risk of Poliomyelitis in English Doctors

According to a report in the February 16, 1957 issue of the British Medical Journal, No. 5015:372, physicians in Great Britain are at greater risk of death from poliomyelitis than is the adult population as a whole. In a special study group of 34,494 physicians observed between 1951 and 1956, there were 8 deaths from poliomyelitis with ages ranging from 28 to 41, whereas, the expected death rate on the basis of the experience of the total adult population would have been only 1 case. There was no relationship to specialty.

Whether this reflected a special lack of immunity in the select socio-economic group represented by physicians or was the result of heavier exposure to a virus shedding group was not apparent. It was evident that English physicians were either at special risk of contracting poliomyelitis or, having contracted it, of dying from it.

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General Hospital Admission X-rays

(A review of the admission x-ray program at Ellis Hospital, Schenectady, N. Y., demonstrated the value of this procedure. Admission chest x-rays should be routine in general hospitals since they aid in discovering more unknown disease than other routine admission examinations. The value of admission x-rays to the physician is in direct relationship to utilization and interest. The followup study is an important part of the program.)

The discovery and isolation of the unknown cases of tuberculosis has been and continues to be the primary objective in the control of this disease. This objective will become increasingly important as the death rate and morbidity rate decline.

The population may be divided into 4 groups for the purpose of detecting significant cases of tuberculosis:

1. Those patients who visit their physicians because of symptoms of disease in the lungs. This is by far the most important group not only because of the higher incidence of tuberculosis among them, but also because if tuberculosis is the cause of their symptoms, they already are spreaders of the disease.
2. Patients admitted to general hospitals. The symptoms of pulmonary disease and the presence of disease in the lungs may or may not have been the reason for admission to the hospital. The presence of pulmonary disease may merely have been coincidental. These individuals are frequently symptomatic and under the observation of a physician. They are second in importance to the first group only from the point of view of classification.
3. Those individuals who have close contact with a known case of active tuberculosis.

4. The apparently healthy individuals.

This discussion is concerned with the routine admissions to general hospitals. Group studies on the prevalence of tuberculosis in general hospital admissions up to within the last 2 years have shown x-ray evidence of tuberculosis in from 2.8 to 8.1% of the patients admitted. Of this group the presence of active tuberculosis has varied from 0.6 to 1.8%. These studies have shown further that active tuberculosis in individuals x-rayed on admission to general hospitals has been from 2 to 6 times as productive in the yield of significant tuberculosis as have other types of mass x-ray examinations.

The detection of infectious, active tuberculosis and the isolation of the patient in the general hospital is of significance from many points of view. The protection of the hospital personnel by the proper isolation of the patient is obvious. The contributions to the care of the patient in the demonstration and discovery not only of tuberculosis but of nontuberculous diseases of the chest and the cardiovascular system are also important. The admission x-ray is of greater value than are many routine laboratory procedures. It has been demonstrated in various studies that clinically significant abnormalities of the chest are found in from 10 to 15% of all patients examined.

The normal practice of most physicians today is based on routine examinations. Blood count, urinalysis, Wassermann, history, and physical examinations are basic procedures in evaluating the patient's problem. The admission x-ray has become a part of the program of more progressive general hospitals. One might say another routine examination is provided the patient and the physician as part of the first day's admission fee.

The significance and the value of the admission x-ray to the physician is in direct relationship to his utilization and interest. It is not infrequent to observe patients having multiple examinations to determine the diagnosis when the answer is photographically inscribed on the photoroentgenogram on the back of the chart.

There perhaps has been some reluctance in reference to the photoroentgenogram x-ray, based on opinions that the so-called small film is not entirely satisfactory for diagnosis. Certainly, one would not wish to make a final evaluation based on the small x-ray, but the error is usually on the side of safety. The value of an x-ray examination is limited entirely to the interpretation which is placed on the shadows in that x-ray and the aid they give in guidance to other examinations and treatments.

The admission x-ray program at the Ellis Hospital was one of the earliest established in New York State, having been instituted in 1947. A comparative study between the first full year of operation of this program and the last completed year of service, 1948 to 1954, is shown in Tables I and II.

These comparative statistics would seem to confirm observations of the declining incidences of tuberculosis. It is hoped that this tendency will continue until the disease is no longer of major concern. However, until the

problem of immunity in tuberculosis is solved, the search for persons with unknown tuberculosis and the supervision of spreaders of tuberculosis will continue to be the safeguard for keeping the death rate and the morbidity rate at a minimum.

TABLE I.--ELLIS HOSPITAL ADMISSION X-RAYS

	Year	
	1948	1954
Number of adult admissions	11,487	11,281
Number of admissions x-rayed	8,734	8,641
Percent of admissions x-rayed	76	76
Total x-rays	11,039	11,621
Diagnosis of admission x-rays by x-ray department		
Total abnormal diagnoses		
Number	1,599	1,452
Percent	14.4	12.4
Total nontuberculous diagnoses		
Number	1,259	1,248
Percent	11.4	10.7
Total active tuberculosis diagnoses		
Number	158	82
Percent	1.4	0.70
Total inactive tuberculosis diagnoses		
Number	162	122
Percent	1.6	1.04

The discovery of tuberculosis in mass surveys of the general population, in contrast to selected groups such as general hospital admissions, calls for the examination of more and more individuals to find a single case of significant tuberculosis. This has reached the point today of almost insignificant yield. The search for tuberculosis in the future must be more selective than it has been in the past. As the incidence of tuberculosis declines and ambulant treatment of tuberculosis increases, the responsibility of the family physician in the control of tuberculosis becomes greater.

TABLE II.--FOLLOWUP STUDY OF ADMISSIONS DIAGNOSED
ACTIVE AND INACTIVE TUBERCULOSIS IN RELATION TO TOTAL
NUMBER X-RAYED

Diagnosis	Year	
	1948	1954
ACTIVE TUBERCULOSIS		
Active tuberculosis		
Number	40	4
Percent of total x-rayed	0.35	0.03
Inactive tuberculosis		
Number	35	8
Percent of total x-rayed	0.32	0.06
INACTIVE TUBERCULOSIS		
Active tuberculosis		
Number	2	1
Percent of total x-rayed	0.01	0.003
Inactive tuberculosis		
Number	126	61
Percent of total x-rayed	1.14	0.52

Likewise, the general hospital will have to assume greater responsibility for this program in its community.

The followup study of tuberculosis and other diseases of the lungs detected by such examinations is perhaps the most important phase of the program. The patients involved are under the care of their family physicians and he is responsible for the followup study. More and more hospitals are accepting chest x-ray programs as an established procedure which has significance both to the physician and to the patient in arriving at a diagnosis. A serious argument for the establishment of such programs is the physician's responsibility for followup evaluation. This is particularly important when the growing rate of malpractice suits is considered.

Failure to use the x-ray at all, or failure to make sufficient use of the x-ray, has been the chief allegation in many malpractice actions. It seems reasonable, therefore, to point out that failure to give routine x-ray on hospital admissions may in the not too distant future be considered negligence. (Abstract from Tuberculosis Abstracts, National Tuberculosis Association, XXX: 3, March 1957; J. M. Blake and K. L. Mitton, General Hospital Admission X-rays: New York J. Med., 56: 3006-3008, 1 October 1956)

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